097.3
Z1092
No. 592
C.I.D.
17
R+A-592

COORDINATOR OF INFORMATION

125826

DEPARTMENT OF STATE
REFERENCE DIVISION
FILE COPY
PLEASE RETURN
REF

NOTES ON THE MILITARY SIGNIFICANCE AND DEFENSE OF CEYLON

Report No. 4

February 27, 1942

Copy No. 41

CONFIDENTIAL

COORDINATOR OF INFORMATION

Research and Analysis Branch

British Empire Section

NOTES ON THE MILITARY SIGNIFICANCE AND DEFENSE OF CEYLON

Report No. 4

February 27, 1942

CONFIDENTIAL

CONTENTS

1. Importance of Ceylon, especially to Defense of India.
2. Strategy of Attack on Ceylon.
3. Present Defense.
4. Geographical Notes.
5. Sociological Notes.
6. Government.
7. Economic Situation of Ceylon.
8. The Andaman and Nicobar Islands.
9. The Maldive Islands.
10. Conclusions.

Appendix.

SUMMARY

The purpose of this report is to indicate very briefly the strategic importance of Ceylon, its vulnerability, and the chief factors of the island's life that it would be useful for any American defensive force to note at this time. The report is not meant to furnish all the information that would appear in a War Department's strategic survey.

Figures in brackets following each paragraph show the corresponding section of an M.I.D. report to which the paragraph is relevant.

CONFIDENTIAL

NOTES ON THE MILITARY SIGNIFICANCE AND DEFENSE OF CEYLON

1. Importance of Ceylon, especially to Defense of India.

With the Malay Peninsula and Singapore now occupied by the Japanese, and Lower Burma on the verge of occupation, Ceylon assumes importance as (1) the site of the remaining naval bases protecting the Bay of Bengal and the central area of the Indian Ocean, and (2) a possible base for a Japanese invasion of South India. The Andaman islands, with some slight supplementary use of the Nicobar islands, might be a kind of intermediate point of poise for the jump across the Bay of Bengal, and the Maldive islands, southwest of Ceylon, might be a secondary base for the Japanese to use in a pincers movement on that island. (i 2 a)

An advance against Ceylon, coupled with a drive through Burma and along the Burmese coast, might be strategy for taking India. The eastern coast defense of India is much weakened by the loss of Singapore and the imminent fall of Rangoon; there are no good ports there for naval operations; and, if Ceylon can be conquered, the difficulties of invading India will be materially reduced. (ii 2 a)

Ceylon lies at the point of India, and is separated from the mainland by the narrow and shallow Palk Strait. The most important fact about its location throughout history has

been this proximity to India, which has made contact between the two very easy. Passageway between them is by means of Adam's Bridge, a series of minute islands and sand bars across the Palk Strait. The terminus of the South Indian Railway at Dhanushkodi on this "bridge" is only 21 miles from Talaimannar (or, Mannar), where the Ceylon Government Railway begins. For the last few miles before Dhanushkodi the railroad is built on an embankment, tiny islands, and bridges; and a detailed survey was made in 1913 for constructing a causeway over the present open space to complete the through rail service. The causeway would be 20.05 miles long, and 7.19 of it would be upon the dry land of the various islands in the route. The rest (12.86 miles) would be built across shallow water or reinforced concrete piles. Once the causeway was built, the expectation was that sand would be driven by the current against the piles and fill up the interstices until eventually the whole would constitute a single long island between Ceylon and the mainland. (i 2 a)

Besides this very simple way of crossing the strait, it is possible to go by boat from Colombo to Tuticorin (150 nautical miles) in India, or from Jaffna, which is north of Adam's Bridge, to various small fishing villages, also on the mainisland, no more than 50 miles away or even to inferior ports, such as Karikal. (ii 2 a)

For most of the year the waters around Ceylon are calm and it is easy to cross from Colombo or Jaffna or from the minor ports of Trincomalee and Galle, which are more distant from India. It is evident that, if the Japanese should

take Ceylon, they would have at least two good harbors from which to operate (Colombo and Trincomalee), some lesser harbors, and several hundred miles of easily accessible Indian Coast to strike, with few, if any, defensive works there to check them. (i 2 a)

It may be assumed that the Japanese know their facts and have considerable detailed information on hand about Ceylon.

2. Strategy of Attack on Ceylon.

The center of Ceylon's life is the port of Colombo, which in pre-war years was visited by more ship's tonnage than the ports of Calcutta, Bombay, and Karachi combined. It is 1572 miles from Singapore, while Trincomalee, the second port of the island, is a little less. If Japan takes northern Sumatra, she can use Sabang at the tip of the island as an ancillary base to Singapore for operations in the Bay of Bengal. This port has excellent water, but no facilities except a floating dock, which, however, the Dutch could easily destroy. It is about 950 nautical miles from Colombo. The port of Nancowry in the Nicobar islands and Port Blair in the Andamans, both excellent anchorages but without facilities, are about 700 nautical miles from Ceylon. About 400 miles southwest of Ceylon are the coral islands known as the Maldives, administered by Ceylon, and frequented by sailing vessels. Ceylon is, therefore, open to attack from a number of points by any power that can establish naval supremacy in the Bay of

Bengal and adjacent parts of the Indian Ocean. (i 2 a)

3. Present Defense.

At present the defense of Ceylon is almost entirely naval. There is a strong squadron stationed there, which is possibly supplemented by ships from the former British East Asiatic Station at Hongkong. Shore defenses are very slight--a battery at Colombo; possibly some gun emplacements also at Trincomalee--and a few thousand troops. Air force seems not to exist, except as a part of the naval station.

The manner of defending Ceylon on a more adequate scale would be influenced by various geographical, sociological, governmental and economic considerations, which are now to be mentioned. (i 2 a)

4. Geographical Notes.

Ceylon consists of a mountain mass in the south center, rising as high as 8,281 feet in the Pidurutalagala peak, and around this mass are broad coastal plains. The total area of the island is 25,032 square miles, and the longest diameter is 270 miles, running from north to south.

The coast of Ceylon is irregular, with small harbors and landing beaches, while coral reefs, sandbanks, shoals, and rocks are numerous. All around the island are sand-dunes, behind which are frequently fresh-water or brackish-water lagoons, some of which are open to the sea. The rivers are short, running down from the mountains in the center, and are not used for navigation. The Mahaweli Ganga, which empties into Trincomalee Bay, is the longest (206 miles). The terrain should be good

for the type of operations which the Japanese have been employing. (ii 6)

The climate of Ceylon is for the most part healthy, except for epidemics of a particularly virulent type of malaria, which come at irregular intervals. Troops need special protection against it. (ii 10)

The mean annual temperature of the coastal region is about 81° F. with such slight variation throughout the year as only $2\frac{1}{2}$° at Colombo, 7° at Trincomalee. Variation between night and day is also slight; at Colombo it is within a range of 12°. At the hill resort of Nuwara Eliya the mean annual temperature ranges from 57.5° to 60°. (ii 10)

The annual rainfall varies from less than 40 inches in the dryest regions to over 200 in the wettest. The heaviest rainfall is in the southwest part of the island on the southwest side of the mountain mass. The lowest rainfall is on the northwest and southeast edges of the island. The southwest monsoon brings rain from January to October. The northeast monsoon comes in November and December. (ii 10)

About one-fifth of Ceylon is under cultivation; about one-fifth is heavily forested. There are many regions, once forested, now given to rubber and tea plantations. (ii 8,9)

The island falls into three natural divisions: (1) the hill country in the center; (2) the lowland between the hill country and the sea; (3) the Jaffna peninsula and the limestone region of the north. Administratively it is divided into 9 provinces; (ii 8,9)

Northern Province	abbreviated as	N.P.
North-Central Province	" "	N.C.P.
North-Western Province	" "	N.W.P.
Eastern Province	" "	E.P.
Central Province	" "	C.P.
Province of Uva	" "	U.V.A.
Western Province	" "	W.P.
Province of Sabaragamuwa	" "	SAB
Southern Province	" "	S.P.

5. Sociological Notes.

The history of Ceylon begins, according to the local records, in the 5th century B.C. Earlier than that time the island had been settled, first by the Veddas, later by immigrants from India. Buddhism came in the third centruy B. C., and under royal patronage was established as the dominant religion of the island. The main feature of Ceylonese history, until the arrival of the Europeans, lay in Tamil invasions from South India and occasional invasions of the mainland by the Sinhalese in return. The nothern part of the island remained Tamil in character. The Portuguese came to Ceylon in 1505, settling on the south and west coasts. The Dutch succeeded them in the middle of the 17th century, and took over the settlements. In 1796 the British annexed the foreign settlements making them part of the Madras Presidency, but in 1802 they were separated to form a Crown Colony. In 1815, after a rebellion by the King of Kandy, the British annexed the interior. (iii 15)

The population of Ceylong, according to the census

of 1931, was 5,306,803, an increase of 18 percent since 1921. This increase is alarming in view of the fact that there is no corresponding increase in the islands productivity.1/ The chief occupation is agriculture, which takes 62 percent of the population; industry takes 12 percent; trade takes 8 persent. The chief cities are Colombo with 284,155, Jaffna with 45,708, Galle with 38,424, Kandy with 37,147. (iii 16)

The divisions among the population are those of race, language, and religion, and these influence the political alignments in the country.

The Veddas are the descendants of the earliest known inhabitants of Ceylon. Their ethnic relations outside of Ceylon are disputed. In 1921[2]/their number was given as 4,510, a decline from 5,332 in 1911, and a figure which gives them ethnological, but not political importance.(iii 17)

Most of Ceylon's population is descended from immigrants from India, ancient and modern. Some of them came from South India, and they have given the island its prevailing physical type. The others, fewer in number, came from northern India, and brought an Indo-European (Aryan) language with them from which is descended modern Sinhalese.

The Census lists groups of the population according to "race" rather than language, and its figures give percentages

1/ Letter from Mr. H.J. Huxham, Financial Secretary of Ceylon to G. A. Armstrong, American Consul in Colombo, November 15, 1938.

2/ Figures were not published for 1931.

as follows:

	Percent
Sinhalese	67
Tamils	24.9
Moors	6.3
Europeans	.2
Burghers & Eurasians (descendants of mixed Dutch, British, and Ceylon peoples)	.2
Malays	.3
Veddas	.1
Others	.5

Religious and linguistic distinctions conform fairly closely to each other:

			Percent
Buddhists	(Sinhalese language)	about	60
Hindus	(Tamil ")	"	22
Muslims	("Moors", Malays)	"	6.6
Christians		"	10

Of the Christians about 83 percent are Roman Catholics.

Literacy is about 34 percent. (iii 18 24)

Other fissures in the population are occupational. Workers on the tea and rubber estates numbered 790,376 in 1931, being about 15 percent of the total. These are concentrated in C. P., Uva, and Sab. Wages and living conditions are very bad, and these people constitute a dissatisfied bloc of the population. Since 692,540 were Indian Tamils, their living conditions, rights of citizenship in Ceylon, and other rights have been a matter of serious concern to the Government of India. Negotiations have been in progress on this subject as recently as during the latter part of the summer of 1941, and proposals for settling them were discussed in the Indian Council of State at the end of November. (iii 20)

The police force had a total strength of 3,279 in 1938,

of whom 1,876 were Sinhalese, 466 Malays, 415 Tamils, 179 Burghers, 45 British (in upper posts), and the rest Ceylon Moors, and others. Crime may be judged from the number of homicides during that year, which was 390, about 8 to every 100,000 of population, which is a high figure. As a rule, however, the Sinhalese are obedient to constituted authority. Armed uprisings, as in Burma, are unknown. (iii 25)

The people of Ceylon have not shown themselves in recent years to be inclined to warlike pursuits, and in the past they have rarely achieved any military distinction. It is not to be expected that they would offer any resistance to invaders.

The newspapers of Ceylon are chiefly owned by the Associated Newspapers of Ceylon, a Sinhalese company. One other paper is British owned. The papers are:

Associated Newspapers of Ceylon Ltd.	
Ceylon Observer, daily (morning)	English
Ceylon Observer, Sunday ed.	
Ceylon Daily News (afternoon)	
Ceylon News (weekly)	
Dinamina, daily	Sinhalese
Silumina, Sunday	
Thinakaran, daily	Tamil
Times of Ceylon, daily	English

These papers have in no case a circulation of more than 10,000. Journalistically, the Ceylon Observer is probably the best paper on the island, but the Times of Ceylon has a larger circulation among the British and represents the British point

of view. The Associated Newspapers of Ceylon Ltd. directed by Mr. D. R. Wijewqrdene, take a liberal, but not radical or violent, political stand. The newspapers in Ceylon are under censorship and strict regulations, but offenses are very few, quite unlike the case in India or Burma. (iii 26)

6. Government.

Ceylon is a Crown Colony, under the British Secretary of State for the Colonies, and is governed according to the Donoughmore Constitution of 1931, with some later amendments. The Governor dominates the system, and is appointed by the Colonial Office. He has a ministry of ten members. Three of these are known as Officers of State and are appointed by him. These are the Chief Secretary, who is chairman of the Board of Ministers, the Legal Secretary, and the Financial Secretary. The other seven are responsible to the State Council. The present ministers are:

Home Affairs: Sir Don Baron Jayatilaka (Leader of the State Council)
Agriculture and Lands: Don Stephen Senanayako
Local Administration: S. W. R. D. Bandaranaika
Health: W. A. de Silva
Labour, Industry and Commerce: G. C. S. Corea
Education: C. W. W. Kannangara
Communications and Works: Major J. L. Kotalawala

The State Council has the administration of the subjects of government represented by these seven ministers. Other departments, such as finances and defense, are controlled by the Governor. The State Council consists of 61 members of whom 3 are officials, 8 are nominated by the Governor, and 50 are

elected. The Council's powers are not final in the subjects allotted to them; for the Governor can enact legislation which he considers needed, and veto acts by the council of which he disapproves, while he has final control over finances. (iv 27)

This very limited kind of democratic procedure has not satisfied Ceylon. The people's leaders have asked for self-government, but their demands have not produced any definite results. In 1939 the Governor made 31 proposals for reform, which have not yet been adopted, and in the discussion of them, elected members of the Council expressed their immediate aims in constitutional reform. The first object was curtailment of the Governor's power. The Officers of State, who were mentioned above as appointive, have powers which the elected members of the Council fear, and these members want them abolished and new ministries created. As a corollary they want a Chief Minister, to be appointed from the State Council, who would have the confidence of the Council's majority. Such changes would constitute a long step toward full representative government. (iv 27)

During the war the consitutional issue has lain dormant, but not dead. In the London Times for October 29, 1941, the Colonial Office in London announced that the British Government has under further consideration the question of constitutional reform in Ceylon, but before taking any decisions on the proposals already made wishes additional examination by commission or conference after the war. (iv 27)

Considerable dissatisfaction arose in 1939-40 over the defense plan for Ceylon. At first, knowledge of its details was withheld from the ministers; later, when the scheme was revealed under pressure of the Council of State, there was further dissatisfaction because so small a share was given to the inhabitants of Ceylon. It was thought the Europeans did not trust the Sinhalese. (iv 27)

Labor troubles in the up country estates, where many Tamils are employed, have occurred in the past two years, and some have had to be suppressed by force. (iii 25)

The principal political party in Ceylon is the Sinhalese bloc, representing the majority of the population, and commanding 40 votes of the State Council's 61. All other parties, of whom the chief is the Tamil bloc, can muster only 17 votes. All the minorities--Tamils, Burghers, Eurasians, Europeans, Moors--fear the Sinhalese and want weighted representation, so that the majority will have only 50 percent of the seats.(iv 28)

The leading political figure in Ceylon is Sir D. B. J Jayatilaka, who is a student of antiquity and Buddhism as well as government. The next most important person is Mr. D. S. Senanayake. (iv 29)

There are a few Japanese in Ceylon--in 1931 only 52 were listed for Colombo, but the impressions of a traveller and a resident there in 1938 would indicate that the number had grown considerably by then. Besides these residents many Japanese traders visit Ceylon, and a very large number of Japanese tourists,

travelling all over the island with the ostensible purpose of viewing the Buddhist monuments there, the remains of their common religion, and carrying the usual camera. Fifth-column activity is possible and previous examination of the ground by Japanese could easily have been made. (iv 30)

7. Economic Situation of Ceylon.

The essential factor in the economic situation of Ceylon, and one that cannot be sufficiently emphasized, is that while it is primarily an agricultural country, it does not produce enough food to satisfy its own needs. Two-thirds of the food supply has to be imported. Rice, the staple food of the Sinhalese, has to be brought from Burma and with that country now exposed to imminent conquest, Ceylon, in mid-February, 1942, is asking India to guarantee an uninterrupted flow of food for the island. (See FCC Daily Report Official Radio Broadcasts, February 17, 1942, from Delhi, India.) (v 31)

The second most important fact about the economy of Ceylon is that its main exports, tea, rubber and to a more limited extent coconut products, while of great value, do not directly benefit the island economically. There is a heavy investment of British capital in the Ceylonese rubber and tea estates and their profits go to companies in the United Kingdom. The commodities are paid for directly in London and only the cost of production is remitted to Ceylon. This state of affairs naturally gives rise to dissatisfaction among the Sinhalese and is one of the most potent factors in fanning the

fires of their nationalism. The coconut industry, on the other hand is to a large extent owned by islanders, and the greater part of the money realized from coconut products remains in Ceylon. (v 31)

Besides the three major products of Ceylon, there is considerable production of spices (such as cinnamon), kapok, cacao and plumbago (graphite), which last in the past has gone principally to Japan. The United States is the largest purchaser of Ceylon rubber and the second largest of tea, while the Philippine Islands have bought the major part of Ceylon's supply of cacao. (v 31)

In 1939 the total exports of Ceylon amounted to Rs. 304,859,627 ($100,282,772 at that time). Of this, 49.5% went to the United Kingdom, 20% went to the United States, 4% to Canada, and 3½% to British India, and 23½% to various other countries. In the same year, Ceylon imported goods to the value of Rs. 242,369,560 ($79,726,825). These imports consisted principally of foodstuffs (roughly from 1/2 to 2/3 of the total), textiles, petroleum products, iron and steel, fertilizers, and coal. The principal sources of supply were British India (21.5%), United Kingdom (18.7%), Burma (15.5% of which roughly 9.5% was rice). 5.8% of the total imports came from Japan and were chiefly textiles, 5.2% came from Sumatra and 2.47% from the United States. 1/ (v 38)

1/ Trade Information Sheet, American Consulate. Colombo, Ceylon. February 15, 1940.

Ceylon's import bill for food, drink, and tobacco is the largest that the island has to meet. In one of the last normal pre-war years, 1937, over one-half of the total food products imported into the island consisted of rice.1/ (v 38)

In that year, Ceylon purchased 10,000,000 cwts. of rice, enough to feed two million people for one year, an item which highlights the rather distressing fact, that up until the outbreak of the war, the government of Ceylon had made no adequate preparations for feeding the five million inhabitants of the island. In 1938, actual famine existed in certain districts.2/ Just before the beginning of hostilities in September 1939, the government required rice dealers to carry emergency stocks. The price of rice was subjected to regulation and it was hinted that the government might take over distribution in case of war.3/ The exigencies of the war have aroused the government of Ceylon at long last to the dire possibilities of the island's food situation. Efforts have been made to boost a "grow more food" campaign, Crown lands have been rented out to peasants and middle class farmers at nominal rents,4/ and purchases of paddy at a fixed price have been guaran-

1/ Annual Review of Commerce and Industry in Ceylon, American Consulate, Colombo, January 31, 1938.

2/ Annual Review of Commerce and Industry in Ceylon for 1938 by George Alexander Armstrong, American Consul and John Ordway, American Vice Consul, Colombo, Ceylon.

3/ Outbreak of War in Ceylon, Report by John Ordway, American Vice Consul, Colombo, Ceylon. September 7, 1939.

4/ Annual Review, etc. for 1940 by George M. Graves. American Consul, Colombo, Ceylon.

teed by government. A further attempt to encourage the consumption of Ceylon-grown rice has only been moderately successful, because the Sinhalese prefer the polished Burmese rice to which they have long been accustomed. (v 31)

Of recent years the importance of irrigation has again begun to be appreciated. In the middle ages Ceylon is said to have had a population twice its present one, supported by means of the excellent "tanks" or irrigation schemes which dammed up the rainfall and allowed it to be stored for future use, so that there was probably double the acreage of paddy that there is at present. The necessity for irrigation depends on the fact that rice grown in water, and, although the yearly rainfall is heavy, it is seasonal, and rice would dry and rot in the long rainless periods. Of the 800,000 acres under paddy, 270,000 get sufficient rainfall and in 1936, 162,890 acres were artificially irrigated.1/

In 1940, tea exports represented 58% of the total value of Ceylon's exports, amounting to 246,800,824 lbs. to the value of Rs.208,299,208 (about $6,000,000) at the present rate of exchange. This great industry of Ceylon has suffered dislocations from the war. In 1940, the German invasion of Europe produced disorganization and violent price fluctuations. In February 1940, high grown tea fetched Rs. 1.05 per lb., but by April of that year the same tea was selling for Rs. 0.72.2/ Common teas averaged Rs. 0.80 at

1/ Irrigation in Ceylon by John Ordway, American Vice Consul. Colombo, Ceylon. August 15, 1938

2/ Annual Report of Commerce, and Industry for Ceylon 1940 by George M. Graves, American Consul, Colombo, Ceylon. January 21, 1941.

Due to its large size, the following document has been filmed in segments. The order of the segments is as follows: left to right, top to bottom.

CEYLON

125826

GOVERNMENT RAILWAY

SCALE, 24 MILES TO AN INCH

1 / 1,520,640

Railways { Broad Gauge ---------- ; Narrow Gauge ----------

Note.

Figures shewn before or after the names of Railway Stations represent mileage from Colombo

Point Pedro
256 KANKESANTURAI
254
231
229
227
214
PARANTHAN 208
KILLINOCHCHI 206
Kanakarayan Aru
Mullaittivu
MANKULAM 186
Rameswaram 242
D. I. RAILWAY
DHANUSHKODI 231
FERRY SERVICE
ADAM'S BRIDGE
TALAIMANNAR PIER 209
TALAIMANNAR 207
201
192
PUTTALAM 186
MANALKULAM 183
MURUNKAN 178
MADHU ROAD 169
PEARL BANKS
PULIYANKULAM 172
OMANTAI 165
VAVUNIYA 157
156 CHEDDIKULAM
MADHU, SHRINE
MADAWACHCHI 143
TRINCOMALEE 183
CHINA BAY 179
Horawupotana
170 TAMPALAKAMAM
ANURADHAPURA, HISTORIC BO-TREE
JUNGLE
PARASANGAHAWEWA 136
Kahatagasdigiliya
Mihintale
ANURADHAPURA 127
KANTALAI 158
KITTULUTTU 153
SIGIRIYA, ANCIENT ROCK FORTRESS
N C P
AND
TALAWA 117
Kala Oya
TAMBUTTEGAMA 111
Maradankadawala
GAL-OYA 140
POLONNARUWA, RUINS
ALUVIHARE, ROCK TEMPLE
ST. ANNA'S, SHRINE
115 IHALAGAMA
KEKIRAWA 116
MINNERIYA 141
HABARANA 129
PALUGASWEWA 125
Putta
83
TALAI
KALAWEWA 121
GALGAMUWA 99
HATTAMUNE 153
PUNANAI 192
VAK
NEGAMA 106
Sigiriya
WELIKANDA 177
MAICHCHENAI 198
KALKUDAH 200
AMBANPOLA 93
181 POLONNARUWA
KOLAKANAWELA 171
MANAMPITIYA 167
BAMBULLA, ROCK TEMPLE
MORAGOLLAGAMUWA 99
Dambulla
KONWEWA 92
MAHO 85
FOREST
YAPAHUWA, ANCIENT ROCK FORTRESS
68 MUNDEL
N W P
Deduru Oya
63 BATTULU OYA
Nalanda
GANEWATTA 72
58 BANGADENIYA
51 CHILAW
47 KAKKAPALLIYA
44 MADAMPE
COCONUT
WELLAWA
PERADENIYA, ROYAL BOTANIC GARDENS
59 KURUNEGALA
42 KUDAWEWA
NATALE 92
(1135 FT.)
Mahaweli Ganga
Maduru Oya
E P
S P
BATTICALOA 217
BIBUKULA, MOUNTAIN 6679 Ft.

ANURADHAPURA, HISTORIC BO-TREE

ST. ANNA'S, SHRINE

BAMBULLA, ROCK TEMPLE

YAPAHUWA, ANCIENT ROCK FORTRESS

PERADENIYA, ROYAL BOTANIC GARDENS

KANDY, DALADA MALIGAWA

GAMPAHA, BOTANIC GARDENS

ST. CLAIR FALLS

DEVON FALLS

PEDRO, HIGHEST MOUNTAIN IN THE ISLAND 8292 Ft.

ADAM'S PEAK, BUDDHA'S FOOT PRINT

KIRIGALPOTTA, MOUNTAIN 7857 Ft.

SIGIRIYA, ANCIENT ROCK FORTRESS

POLONNARUWA, RUINS

ALUVIHARE, ROCK TEMPLE

KALKUDAH 200

RAHUNUKULA, MOUNTAIN 6674 Ft

BATTICALOA 217

NUWARA ELIYA, SANITORIUM

YAKGALA, BOTANIC GARDENS

TOTAPOLA, MOUNTAIN 7741 Ft

LAKSAPANA FALLS

MADAWACHCHI 143

JUNGLE

PARASANGAHAWEWA 135

Horawupotana

Kahatagasdigiliya

Mihintale

ANURADHAPURA 127

N C P

Kala Oya

TALAWA 117

AND

TAMBUTTEGAMA 111

Maradankadawala

115 IHALAGAMA

KEKIRAWA 116

GALGAMUWA 99

KALAWEWA 111

NEGAMA 106

AMBANPOLA 93

MORAGOLLAGAMUWA 99

Dambulla

KONWEWA 92

MAHO 85

N W P

Deduru Oya

63 BATTULU OYA

GANEWATTA 72

Nalanda

56 BANGADENIYA

51 CHILAW

47 KAKKAPALLIYA

44 MADAMPE

COCONUT

WELLAWA

42 KUDAWEWA

38 NATTANDIYA

59 KURUNEGALA

53 POTUHERA

45 POLGAHAWELA 241 Ft

33 LUNUWILA

30 BOLAWATTA

27 KOCHCHIKADE

24 NEGOMBO

21 KURANA

20 KATUNAYAKE

17 SIDUWA ROAD

13 JAELA

11 KANDANA

9 RAGAMA

6 HUNUPITIYA

4 KELANIYA

1 COLOMBO FORT

2 SLAVE ISLAND

3 KOLLUPITIYA

BAMBALAPITIYA

6 WELLAWATTA

8 DEHIWALA

9 MOUNT LAVINIA

10 RATMALANA

11 ANGULANA

12 LUNAWA

13 MORATUWA

15 EGODA UYANA

18 PANADURA

21 WADDUWA

26 KALUTARA,N

27 KALUTARA,S

29 KATUKURUNDA

31 PAIYAGALA,N

32 PAIYAGALA,S

33 MAGGONA

35 BERUWALA

38 ALUTGAMA

42 INDURUWA

45 ROSGODA

50 BALAPITIYA

53 AMBALANGODA

57 KAHAWE

60 HIKKADUWA

64 DODANDUWA

69 GINTOTA

72 GALLE

79 TALPE

85 AHANGAMA

95 KAMBURUGAMUWA

MATARA 99

W P

S A B

RUBBER

Gin Ganga

S P

Hambantota

Mahaweli Ganga

Maduru Oya

E P

TRINCOMALEE 183

CHINA BAY 179

170 TAMPALAKAMAM

KANTALAI 158

KITTULUTTU 153

GAL-OYA 140

MINNERIYA 147

HABARANA 129

PALUGASWEWA 125

HATTAMUNE 153

181 POLONNARUWA

WELIKANDA 177

KOLAKANAWELA 171

MANAMPITIYA 167

PUNANAI 192

VAKARAI 192

BATTICALOA 198

KALKUDAH 200

PANDIRUDI 205

VAVUR 209

MATALE 92 1135 FT

UKUWELA 89 1200 FT

WATTEGAMA 82

KATUGASTOTA 78

MAHAIYAWA 76

KANDY 74 1600 Ft.

PENADENIYA NEW 71 1573 FT

PERADENIYA JUN 71 1562 FT

Orangurankeda

GAMPOLA 78

TEA

NAWALAPITIYA 87

HANGRANOVA 91

WATAGODA 132

GREAT WESTERN 134

NUWARA ELIYA 135 6187 Ft.

ROOKWOOD 145

RAGALLA 142 6981 FT

KANDAPOLA 140 6316 FT

BLACKPOOL 132 5299 FT

NANU OYA JUN 128 5299 FT

BADULLA 128

HALI ELA 127

Passara

DEMODARA 122

ELLA 186

BANDARAWELA 184 4036

DIYATALAWA 15 4363 FT

DAPUTALE 154 4700 FT

Pottuvil

U V A

GALBODA 84

KOTAGALA 3862 FT

ALGAMUWA 43

100 WATAWALA

104 ROZELLE

98 HATTON 4174 FT

AMBAWELA 137

PATTIPOLA 135

OHIYA 143

149 BALGASHINNA

ST. CLAIR FALLS

DEVON FALLS

RATNAPURA 64

KETIYA 66

Pelmadulla

LOPANAKE 85

70 WAYAPOTA

81

Walawe Ganga

Kataragama

Tissamaharama

CONFIDENTIAL

ANURADHAPURA, HISTORIC BO-TREE

ST. ANNA'S, SHRINE

BAMBULLA, ROCK TEMPLE

YAPAHUWA, ANCIENT ROCK FORTRESS

PERADENIYA, ROYAL BOTANIC GARDENS

KANDY, DALADA MALIGAWA

GAMPAHA, BOTANIC GARDENS

ST. CLAIR FALLS

DEVON FALLS

PEDRO, HIGHEST MOUNTAIN IN THE ISLAND 8292 Ft.

ADAM'S PEAK, BUDDHA'S FOOT PRINT

KIRIGALPOTTA, MOUNTAIN 7857 Ft.

SIGIRIYA, ANCIENT ROCK FORTRESS

POLONNARUWA, RUINS

ALUVIHARE, ROCK TEMPLE

BADURUKULA, MOUNTAIN 6674 Ft.

BATTICALOA 217

NUWARA ELIYA, SANITORIUM

HAKGALA, BOTANIC GARDENS

TOTAPOLA, MOUNTAIN 7741 Ft.

LAKSAPANA FALLS

MADAWACHCHI 143

JUNGLE

Horawupotana

TRINCOMALEE 183

CHINA BAY 179

170 TAMPALAKAMAM

PARASANGAHAWEWA 135

Kahatagasdigiliya

Mihintale

ANURADHAPURA 127

KANTALAI 158

N C P

KITTULUTTU 153

TALAWA 117

Kala Oya

AND

TAMBUTTEGAMA 111

Maradankadawala

GAL-OYA 140

115 IHALAGAMA

KEKIRAWA 116

MINNERIYA 147

HABARANA 129

PALUGASWEWA 125

GALGAMUWA 99

KALAWEWA 111

HATTAMUNE 153

PUNANAI 1

NEGAMA 108

Sigiriya

AMBANPOLA 93

181 POLONNARUWA

WELIKANDA 177

MORAGOLLAGAMUWA 99

Dambulla

KOLAKANAWELA 171

MANAMPITIYA 167

KALKUDAH 200

KONWEWA 92

FOREST

MAHO 85

N W P

Deduru Oya

Nalanda

GANEWATTA 72

Mahaweli Ganga

Maduru Oya

E P

WELLAWA 88

C P

59 KURUNEGALA

MATALE 92

1135 FT

UKUWELA 89

1200 FT

45 POLGAHAWELA

241 Ft.

WATTEGAMA 82

MATUGASTOTA 78

MAHAIYAWA 76

KANDY 74 1800 Ft.

PERADENIYA NEW 71

1573 FT

PERADENIYA JUN 71

1562 FT

Maha Oya

31 MIRIGAMA

184 FT

PALLEWELA 89

VEYANGODA

99 FT

GAMPAHA 17

DEMMULLA 13

GAMPOLA 78

Ohiya

TEA

NAWALAPITIYA 87

HANGRANOA 91

WATAGODA 139

GREAT WESTERN 12

NUWARA ELIYA 135

6180 Ft.

ROOKSIDE 145

RADELLA 147

681 FT

KANDAPOLA 140

6310 FT

BADULLA 1

HALI ELA 137

Passara

GALBODA 84

100 WATAWALA

104 ROZELLE

108 HATTON

4147 FT

BLACKPOOL 132

NANU OYA JUN 128

5291 FT

KOTAGALA 5382 FT

DEMODERA 172

ELLA 168

ANBAWELA 437

PATTIPOLA 135

OHIYA 143

BANDARAWELA 166

4036

HIYATALAWA 15

4363 FT

BALGASHINNA 149

PUTABE 154

4700 FT

U V A

Pottuvil

1 COLOMBO FORT

MARADANA

BASELINE ROAD 1

COTTA ROAD 2

MANNING TOWN 3

KIRILLAPONE 5

NUGEGODA 6

2 SLAVE ISLAND

3 KOLLUPITIYA

BAMBALAPITIYA

6 WELLAWATTA

8 DEHIWALA

9 MOUNT LAVINIA

10 RATMALANA

11 ANGULANA

12 LUNAWA

13 MORATUWA

15 EGODA UYANA

18 PANADURA

21 WADDUWA

26 KALUTARA,N

27 KALUTARA,S

29 KATUKURUNDA

31 PAIYAGALA,N

32 PAIYAGALA,S

33 MAGGONA

35 BERUWALA

38 ALUTGAMA

42 INDURUWA

45 KOSGODA

50 BALAPITIYA

53 AMBALANGODA

57 KAHAWE

60 HIKKADUWA

64 DODANDUWA

69 GINTOTA

72 GALLE

79 TALPE

85 AHANGAMA

95 KAMBURUGAMUWA

99 MATARA

PATTIPOLA 64

Pelmadulla

OPANAKE 85

W P

S A B

RUBBER

S P

Kataragama

Tissamaharama

Hambantota

Walawe Ganga

Gin Ganga

Weligama 80

Tangalla

CONFIDENTIAL

the beginning of 1940 but by the fall of France in June, 1940, the price had sunk to Rs. 0.40 per lb. Tea prices have risen since and the situation of Ceylon's greatest industry has been somewhat stabilized. There have been novel features to the situation, however, such as the transfer to Ceylon of many orders previously executed in London, and the dislocation of shipping facilities which has led to periods of inactivity succeeded by sudden spurts as shipping for export becomes available. (v 38)

The war gave a considerable boost to the export of Ceylon rubber. In 1939 the island exported 60,243 long tons of rubber, but in the following year, 88,177 long tons were exported, in spite of the fact that heavy rains and floods curtailed tapping and destroyed a certain number of trees in that year.1/ But the rubber industry also has been considerably affected by the shortage of shipping available. (v 38)

The coconut industry, which is so largely in the hands of Sinhalese capitalists, has been considerably affected by the war and especially by the loss of its European markets. In 1940, the United Kingdom made practically no purchases of coconut products.2/ The industry suffered the complete loss of its Belgian market for poonac, a coconut oil cake used for cattle food. As a result of these and other dislocations, Ceylon turned increasingly to British India, in order to sell its coconut

---

1/ Ibid.

2/ Annual Report, 1940. Op. cit.

products. Exports decreased from Rs.35,595,245 ($10,700,000) in 1939 to Rs.23,050,701 ($6,910,000) in 1940. (v 31)

Another loss recently suffered by Ceylon has been the domination of the Philippine Islands by the Japanese, for it was to them that practically the entire Ceylonese cacao crop was formerly exported. The Japanese market for plumbago (graphite) has also naturally been lost to Ceylon.

Ceylon is principally an agricultural country, and there are no industries to speak of, although in recent years attempts have been made by the government, under the stimulus of Ceylonese nationalism, to establish small industries such as cigar and cigarette factories, the manufacture of plywood products especially for tea chests, sugar refining, extraction of pig iron from iron ore, etc. Up to date, these attempts have remained on a very small scale. Hydro-electric schemes for the production of cheap and abundant power have also been pushed by the government for the industries still to be established.1/

There are a number of efficiently conducted power plants and water works in Ceylon. There is a large water storage reservoir at Labugama, 30 miles from Colombo, with a total capacity of 1,333,000,000 gallons and waterworks at Kandy, Galle, Bandarwela, Talawakele, Puttalam, and Nuwara Eliya. The island is covered with an extensive electricity network.2/ There are two main power

1/ Annual Report, 1939. Op. cit.

2/ Report of Chief Engineer and Manager, Department of Electrical Undertakings for 1938. Ceylon Administration Reports. Colombo, 1939.

stations at Colombo. There is a 33 k.v. transmission line system supplying the urban district councils, Sanitary Board towns, and other large consumers. The electricity in the northeast of the island is supplied from a hydro-electric and Diesel generating station at Blackpool while another hydro-electric plant at Norton's Bridge supplies the Hatton tea district by means of a 33 k.v. transmission line. (v 33)

The Ceylon Government Railways, though operated at a financial loss, are run on an efficient basis. There are two gauges, the broad 5 foot 6 inches and the narrow 2 foot 6 inches Of the total mileage of 951.16 miles, 834.15 miles are broad gauge and 117.1 narrow gauge.1/ At the end of December 1938, the railways had 216 locomotives for the broad gauge and 31 for the narrow gauge lines with one Diesel locomotive. The railway lines had the following passenger freight vehicles:-

	Broad Gauge	Narrow Gauge
Passenger vehicles	591	111
Other vehicles	118	17
Goods vehicles	2,461	288
Steam Rail Cars	26	6
Total	3,196	422

In 1937-38 the Ceylon Government Railways consumed 155,909 tons of coal, 907 tons of coke, 564 tons of firewood, and 405,756 gallons of oil. All of these fuels save the firewood had to be imported. (v 34)

1/ Report of the Acting General Manager, Ceylon Government Railway for 1938. Ibid. Colombo, 1939.

Ceylon has a considerable network of roads. There is a total mileage of 5,427.42, of which 5,207 are classified as motorable.[1] Of this mileage, 4,464 are fully metalled and 92% of these metalled roads are tarred. There are 303.18 miles of track metalled roads, 493.39 miles of gravelled road and 146.26 miles of natural roads. There are 445 bridges with a span of more than 50 feet. The rule of the road is to the left. Ceylon roads are just wide enough for two cars, but are often much obstructed by water buffalo carts, work elephants and an unceasing stream of pedestrians usually carrying burdens. On December 31, 1938, there was a total of 31,231 motor vehicles registered in Ceylon.[2] Of these 21,044 were motor cars or cabs, 2,625 busses, 4,320 lorries, 49 tractors, 201 trailers and 2,992 motorcycles. In 1938, Ceylon imported a total of 12,291,253 gallons of gasoline. (v 35)

The port of Colombo has long been known as one of the great ports of the world. As its nickname of "Charing Cross of the East" implies, it is a very important port of transshipment for the Middle and Far East. The harbor is protected by great breakwaters and comprises one square mile and has a depth of

---

1/ Report of Director of Public Works and Civil Aviation for 1938 Colombo, 1939.

2/ Report of Registrar of Motor Cars for 1938 in Ceylon Administrative Reports, Colombo, 1939.

about 27 feet.[1] The port facilities are very extensive. There is a graving dock 723 feet long, 85 feet wide at the entrance and with a depth of 30 feet over the sill at low tide. A new inner graving dock 350 feet long and 54 feet wide was completed in 1939. There is also a number of patent slips. There is a large coaling depot, 25 acres in extent, with 18 jetties 200 feet long. One of the jetties is fitted up for discharging oil tankers. In 1938 Ceylon imported 383,454 tons of coal, 418,991 tons of liquid fuel, 26,705 tons of kerosene oil, 34,777 tons of gasoline (petrol) and benzine. In the same year 4,065 vessels with a total tonnage of 13,655,484 entered Colombo Harbor. Various cranes are available up to 35 tons. Unloading of cargo is by lighters. (v 36)

Civil Aviation has not made very much progress in Ceylon. The Colombo Airport was opened on February 28, 1938, and served chiefly for the planes of Imperial Airways coming from the United Kingdom via Karachi. These services were practically suspended after the outbreak of the war. The airport has a landing area of 600 square yards. The area 750 x 150 feet was being widened in 1940.[2] An emergency landing field at Puttalam, in the North-Western Province, had a cleared circle 600 feet in diameter but had been approved only for light and medium types

---

1/ Report of Chairman, Colombo Port Commission for 1938 in Op. cit. Colombo, 1939, and also Murrays Handbook for India, Burma and Ceylon. London, 1938.

2/ Ferguson's Ceylon Directory, 1940. Colombo, 1940. pp.336-7.

of aircraft. Its soil was sandy and apt to be rather soft after rains. Before the outbreak of war in 1939 plans had been made for additional landing fields at Hambantota on the south coast and Anuradaapura in the North-Central Province, and also for using Bolgoda Lake near Colombo as an alighting place for flying boats.1/

The communications of Ceylon are well developed. The telegraph system is under the control of the Post Office and covers the entire island. In 1938 there was a total of 1,832,867 telegrams sent and a total telegraph mileage of 67,000, of which 24,500 were overhead wires and 42,600 miles underground.2/ There was also a total of 9,515 telephones in the island in 1938 and 235 exchanges connected the trunk (long distance) system. Besides the public government owned telephone system, a number of private exchanges, chiefly on the big tea and rubber estates still exist, but are being rapidly taken over by the government. (v 39)

8. The Andaman and Nicobar Islands.

The Andaman Islands, 204 in number, lying in the Bay of Bengal, and administered by a Chief Commissioner under the government of India, have an area of 2,508 square miles and a population (1941) of 21,000, of whom some 7,000 or 8,000

1/ For list of Indian Airports within 300 miles of nearest point in Ceylon see Appendix.

2/ Report of Postmaster General and Director of Telegraphs for 1937-38 in Op. cit.

(figures not yet available for 1941) were convicts sent there to the penal establishment. The Nicobar Islands, 20 in number, south of the Andamans, have an area of 635 square miles and a population of 13,000. The Andamans have excellent anchorages at Port Blair, which is 780 miles from Calcutta, 740 miles from Madras, and 360 miles from Rangoon, and at Port Cornwallis; and the Nicobar Islands at Nancowry and Kar (Car) Nicobar; but none of these has been developed as a port. Nevertheless, the Japanese might find them useful for supplementary bases to Singapore for both naval and air operations. (ii 5)

The Andaman Islands consist of hills and valleys, densely wooded except for a few open spaces. The aboriginal Negrito population is now nearly extinct (only about 460 in 1931). Around Port Blair there is a large Indian and Burmese population. The penal colony makes up a third or more of the whole population. Languages spoken as mother-tongue are mostly those of India and Burma (Hindustani with Urdu 36%; Burmese 14%; Punjabi 12%; Malayan 11%; Bengali 6%; others, chiefly Indian, 21%); the common vernacular is a colloquial Hindustani. In religion the distribution shows Hindus 40%; Muslims 34%; Buddhists 15%; Christians 6%; Sikhs 4%; others less than 1%. Government is without any democratic forms. (ii, iii)

The Nicobar Islands are partly in forests and partly grass fields. The population is almost entirely that of native tribes (about 93%), and the religion, also, is "tribal." Native

languages, of uncertain external connection, but thought to belong to the Mon-Khmor group, are spoken by about 97% of the population. (iii)

Neither the Andaman nor the Nicobar Islands could be expected to offer any resistance to Japanese aggression.

9. The Maldive Islands.

More than 2000 coral islands known as the Maldives lie about 400 miles southwest of Ceylon. Of these 217 are inhabited and had a total population in 1921 of 70,413, which was 2¼% less than the population of 1911. There are thought to be about 2000 uninhabited islands. The inhabited islands are grouped in 18 stolls, administered in 13 districts. The principal island is Malo, with a population of 6,127 (with 3,058 additional in Malo stoll). The Maldivians are all Mohammedans. The language is dialectic Sinhalese, with a number of loan-words from Arabic. Fishing is the chief occupation (60% of the population). A unique industry is that of collecting cowries (shell money), which are exported to India. The islands are flat, and the principal port is Malo. This has an anchorage of 25 to 28 fathoms about three cables (0.3 mile) from the pier. The government is by a sultan (His Highness Hasan Nuruddin Iskander II, who assumed the sword of state in 1939), under the Ceylon Government. There is no reason to suppose that the Japanese would have any opposition in trying to use these islands. They are probably well adapted to the operations of flying boats. (iii)

10. Conclusions.

This study indicates:

1. Ceylon is an excellent base for operations against South India.

2. Ceylon is open to attack by sea from Singapore and Sumatra with some additional possible use of the Andaman and Nicobar Islands and the Maldive Islands.

3. The defense of Ceylon at present is almost exclusively naval.

If Ceylon were taken by the Japanese, the United Nations would lose all control of the Bay of Bengal, and routes to the ports on the Arabian Sea, the Persian Gulf, and the Red Sea would be open to submarine attack. The island would also be a port on the way to meet--or anticipate--the Germans in any push they may be contemplating to the East.

Appendix

INDIAN AIRPORTS

(within 300 miles of nearest point in Ceylon)

A. Airports.—

Bangalore	(R.A.F.). N 12° 58' — E 77° 38'. Repairs. 475 x 425 yds. Altitude: 2940 ft. — 2 miles SE of Bangalore Cantonment.
Cannanore	(Army, Non-Permanent). N 11° 51' — E 75° 22'. 110 x 330 yds. Altitude: 25 ft. — SE corner of Military area in Cannanore.
Cochin Harbour	(New Vypeen reclamation). N 9° 58' — E 76° 17'. Area: 300 x 300 yds. Refuelling by arrangement with Messrs. Brunton & Co. (Engrs.). Cochin.
Madras	N 13° — E 80° 11'. Hangar. Repairs. 850 x 600 yds. Altitude: 20 ft.—Near Race-Course & Government House, 1 mile S of St. Thomas' Mount Cantonment, 10 miles S of Madras.
Madras	N 13° 4' — E 80° 17'. 528 x 425 yds. Altitude: 20 ft.— ½ mile W of St. Thomas' Mount.
Quilon	(Private) N 8° 54' — E 76° 36'. Repairs. 400 x 600 yds. Altitude: 30 ft. —Quilon (Travancore Govt.), on coast, 78 miles S of Port Cochin.
Trichinopoly	N 10° 46' — E 78° 43'. 825 x 775 x 750 x 1000 yds. Refuelling: Burmah-Shell in Trichinopoly. Repairs. Altitude 290 ft. — 4 miles SSE of Trichinopoly; 2½ miles from Railway Station.

B. Emergency Landing Grounds.—(not available during rainy season.)

Madura	Lat. 9° 55'	Long. 78° 9'
Mysore	Lat. 12° 18'	Long. 76° 41'
Tinnevelly	Lat. 8° 43'	Long. 77° 43'

CONFIDENTIAL

PRINCIPAL SOURCES USED

Census of Ceylon, 1921.

Census of India, 1931, with preliminary summary figures of the 1941 Census.

West Coast of India Pilot.

Bay of Bengal Pilot.

Ceylon Directory, 1940.

Ceylon Administration Reports, 1938.

S. E. N. Nicholas, Ceylon the Wonderland of the East, 1939.

S. E. N. Nicholas, Commercial Ceylon, 1933.

Consular Reports from Ceylon.

L. D. Stamp, Asia, 1936.